

Application No.: 10/783,592
Attorney Docket No.: CFA00054US

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Cancelled)

2. (Cancelled)

3. (Currently Amended) An optical encoder comprising:

a scale having an optical grating;

a plurality of photoreceptor elements that are movable relatively with respect to the scale and that are disposed in relation to a pitch of the optical grating;

a light source having at least two light portions which irradiate the photoreceptor elements through the scale from at least two different directions; and

a controller which changes the balance of light-emitting intensity ~~of the~~ between at least the two light portions respectively;

wherein the controller obtains relative-position information of the scale and the photoreceptor elements based on the balance of light-emitting intensity between ~~of~~ the light portions and on the signals obtained before and after the ~~light-emitting intensity of the light portions is changed~~ change of the balance.

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

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8. (New) An optical encoder comprising:
a scale having an optical grating;
a plurality of photoreceptor elements that are movable relatively with respect to the scale and that are disposed in relation to a pitch of the optical grating;
a light source having at least two light portions which irradiate the photoreceptor elements through the scale from at least two different directions; and
a controller which changes the light-emitting intensity of the light portions together;
wherein the controller obtains relative-position information of the scale and the photoreceptor elements based on the balance of light-emitting intensity difference of the light portions and signals obtained before and after the change of the light-emitting intensity.